Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Amendment of Parts 2 and 97 of the Commission's Rules to Create a Low Frequency Allocation for the Amateur Service	)	**ET Docket No.** 02-98 **RM -** 9404
By W. Lee McVey, P.E.	)	
To: Chief, Public Safety and Private Wireless Branch, Wireless Telecommunications Bureau	)	

COMMENTS

My comments are filed to both support of the establishment of a new low frequency Amateur Band and to question the basis for continued use of Power Line Carrier (PLC) systems by the electric utility industry.

Being an Amateur Radio Operator and a Professional Engineer for many years with an electric utility affords me somewhat of a unique and guarded perspective in preparing the following comments.

I. Existing Carrier Schemes Simplistic and Outdated

PLC has largely been used as a back up means to ensure proper zone tripping of substation circuit breakers. It is rarely, if at all, still used as a means of primary transfer trip or as part of a primary tripping communication scheme between associated circuit breakers and protective relays. Further, if the primary means of trip initiation were transmitted on the same transmission line protected by relays requiring the PLC signal, the means of remote trip initiation will most certainly fail should a three-phase, line to line or line to ground fault occur on the line carrying the PLC signal.

PLC has most often been used to avoid unnecessary, out of zone tripping where the closest breaker and its associated relays call for a trip and where distant relays would also call for the same trip as well. Thus avoiding unnecessary wear and tear and perhaps an unnecessary outage. PLC signals have traditionally been just the presence of a carrier signal when blocking is requested, and not encoded or encrypted in any way.

Older, electro-mechanical protective relays often 'over-reached' their desired zones of protection since they could not be adjusted to allow sufficient differentiation. With the advent of modern, microprocessor-based protective relays, much greater accuracy of overcurrent directionality and fault impedance have markedly improved setting accuracy and coordination, taking away the need for out of zone, PLC blocking schemes.

Similarly, high speed tripping of breakers to minimize system disturbances and greater tripping reliability have resulted in the need to employ faster, and more secure path-independent transfer trip communication media such as dedicated microwave, fiber optic or telco lease line options.

II. Conclusion and Recommendations

The Commission should allocate the band to the Amateur Radio Service as proposed. Any electric utilities still using PLC on frequencies within the new band should be requested to re-crystal their equipment and retune their wavetraps a few kilohertz to frequencies outside of the new Amateur Band.

Respectfully Submitted,

(electronically)

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